WASHINGTON STATE DEPARTMENT OF ECOLOGY

Application for a 2015-2017 Floodplains by Design Project Grant

Submitted applications will be rated to create a ranked list in support of Ecology's FY 2015-2017 Floodplains by Design budget request.

Applications must be submitted electronically via email to Ecology by 5:00 pm, **September 8**, 2014. Send applications to:
Adam Sant at Adam.Sant@ecy.wa.gov
With the Subject line: **2015-2017 Floodplains by Design Project Grant Application**
You will receive confirmation that your application has been received by close of business on September 15.
Applicants must use this form as provided. No alterations will be accepted.

Project Title: Snoqualmie Riverfront Project Phase 1

Organization/Jurisdiction Name: City of Snoqualmie
Contact Name: Lauren Hollenbeck
Address: PO Box 987
City, State, Zip Code: Snoqualmie, WA 98065

Phone: (425) 888-5337 ext. 1133
Email: LHollenbeck@ci.snoqualmie.wa.us

Legislative District: 5
County: King
WRIA: 7
Congressional District: 8
Specific Project Location:
Section: SE-30 Township: 24 Range: 8 River Mile: 40
Latitude: **47°31'46.54"N** Longitude: **121°49'28.09"W** GPS coordinates, if available: N/A
Major Watershed Project is in Snoqualmie City limits

---

1. Short Description of Project (500 words or less)

The goal of this project is to acquire five targeted riverfront properties for open space to eliminate flood risk, restore riparian habitat, and provide for shoreline public access and enjoyment. Snoqualmie has been working towards this large scale project for over 10 years and has made significant progress – 32 riverfront parcels have been acquired totaling ~6,310 lineal feet and 46.25 acres. Seventeen properties remain to be acquired from willing sellers in the identified acquisition reach, and one is pending. Ten property owners have confirmed in writing an interest to sell to the City, and acquisition matching funds are secured through the Upper Snoqualmie Valley Residential Flood Mitigation Riverfront Acquisition Agreement with the King County Flood Control District. The City also recently completed a grant-funded Snoqualmie River shoreline public access and restoration plan for developing public access trails and passive recreation amenities, with identified priority restoration needs.

The funding request is to implement the **Snoqualmie Riverfront Phase 1 project,** the first of a projected multi-year/phase shoreline conservation, restoration and public access project involving both the south and north Snoqualmie River shorelines and Borst Lake, which is adjacent the north shoreline within the floodway. The Phase 1 project reach lies between the SR202 river bridge and the City's historic downtown commercial core. The proposed project includes acquisition of 5 floodway riverfront residential properties, 8.5 acres of habitat restoration, and design and construction for 1.2 miles of a multi-use "Riverwalk" trail, including a pedestrian bridge over Kimball Creek and an 800-foot long elevated boardwalk within the historic downtown.

Acquisitions will involve appraisal, title and escrow, environmental reports, relocation assistance (if any), closing, and demolition. Following demolition, design plans, specifications and estimates will be prepared and permits obtained for restoration work and multi-use recreational trail construction. Paved trail segments, 12-16 feet wide, would consist of a 4-inch crushed rock base with asphalt. The 16-20 foot wide boardwalk trail segment would be constructed of low maintenance, sustainable materials such as concrete and Reysysta. Restoration will include removal of non-native plants, installation of native trees, shrubs and live stakes, and 3 years of maintenance and monitoring.

The anticipated Phase 2 project (RCO grant request currently under review) continues east of the historic downtown and involves 2 floodway riverfront acquisitions, 1 acre of restoration, and constructing an additional 500 lineal feet of paved trail and amenities. Phase 3 would complete the final 9 acquisitions along the south shoreline, provide 1.5 acres of habitat restoration, and construct 0.38 miles of paved trail from Riverview Park to the Meadowbrook bridge. Additional future phases will expand the Riverwalk trail and shoreline restoration to the north shoreline, eventually providing a looped trail network with access to and around Borst Lake; city and county recreation areas (Snoqualmie Falls Park, Three Forks Natural Area, Meadowbrook Farm Open Space, Centennial Fields Park, and downtown's Railroad, Sandy Cove, and Riverview Parks) and King County regional trails, which ultimately lead to the 300-mile John Wayne Pioneer Trail connecting to the Idaho border.

2. Flood hazard / risk reduction (*60 points*)

Describe your project and how it will reduce the magnitude or frequency of flood damages to people, structures or infrastructure. Projects will be evaluated on the significance of the flood hazard and the ability of the solution to address the hazard. Evidence of flood hazard reduction can be demonstrated via flood storage added (acre-feet), flood stage reduction [reduced BFE (base flood elevation)], conveyance

increased (cubic ft/sec), sediment storage added or inputs reduced, number or value of structures and/or development rights removed from hazard area (# or areal extent), critical facilities removed from high hazard area, transportation and infrastructure facilities removed from high hazard areas, and other project-specific goals. Describe both upstream and downstream effects of your project.

Answer question 2 here:

Flooding Background

Snoqualmie is one of the most flood-prone cities in the state of Washington. According to the City's April 2010 Hazard Mitigation Plan, the City has been affected by 20 Presidential flood disaster declarations between 1964 and 2010. In past floods, nearly every one of the un-elevated homes in the floodplain had some sort of flood intrusion with water depths exceeding 8 feet above grade in some areas. The Snoqualmie River generally floods in the City every two to five years. During and after floods residents often miss several days of work to clean up flood damage and many have been displaced from their homes for 2 to 4 months following each event. In addition, City staff and public volunteers typically spend several days removing household debris and garbage due to the substantial public health risk created.

The City of Snoqualmie has been identified as a Repetitive Loss Community by FEMA, with 161 repetitive loss and 5 severe repetitive loss properties per the 2014 National Flood Insurance Program (NFIP) Repetitive Loss list. Through its planning process the City has identified the entire floodplain within the city's historic downtown as a Repetitive Loss area. To date, **flooding has caused over $18 million dollars in private property damages and produced 953 flood claims, the highest number of flood claims of any city in Washington,** according to the most recent NFIP BureauNet Claims Information report by the State.

Snoqualmie's local flood hazard comes from the main stem and the south fork of the Snoqualmie River and from Kimball Creek, which joins the main stem just upstream of Snoqualmie Falls. Because the three Snoqualmie River forks and tributaries that carry runoff out of the Snoqualmie River basin are located in steep valleys, floodwaters collect on the flat valley floor where the 110-year old original town is located. The South, Middle and North forks of the Snoqualmie River converge near the Three Forks Natural Area just upstream of the original, older part of the city. Just downstream of the historic city center, the main stem of the Snoqualmie River is forced through a narrow bedrock opening before discharging over the 270- foot Snoqualmie Falls. Due to this narrowing of the channel, floodwaters rise upstream of the falls and overtop the river banks into the floodplain.

Historic construction practices established Snoqualmie's historic community in the floodplain area with more than 650 homes and approximately 70 commercial businesses and institutional uses. To address flood risk, the City began working with its citizens to implement residential property acquisitions and house elevations as flood hazard mitigation measures. Since 1984, approximately 52 flood prone homes in Snoqualmie have been removed from the special flood hazard area (32 of those homes were located along the riverbank including 20 within a mobile home park), and 134 homes have been elevated above the 100-year flood level.

Elevating houses protects lives and property, reduces public risk and damages and is a cost-effective mitigation strategy for much of the floodplain. However, residential properties along the river bank experience deeper and faster-moving floodwaters, subjecting residents and homes to greater risk, and making rescue situations more dangerous. For these reasons, the City has been

pursuing acquisition of riverfront homes along the south bank of the river for more than 10 years, gradually converting these properties to open space. The King County Flood Control District recognized the multiple benefits of riverfront residential property buyouts in Snoqualmie by providing funding for acquisitions as part of the Upper Snoqualmie Residential Flood Mitigation Project.

Flood Hazard/Risk Reduction Benefits

The Snoqualmie Riverfront Phase 1 project includes the acquisition of 5 flood-prone riverfront properties with an estimated combined assessed value of approximately $989,300. Two of the five properties targeted for acquisition reported a combined total of $59,359 in flood damages from the 2006 and 2009 Presidential Disaster declaration flood events according to the NFIP claims and policy information. It is not known why the previous property owners for the other three homes did not submit claims to FEMA, but it is safe to assume that those properties have been similarly impacted by flooding due to documented damages submitted for nearby residences. Acquisitions are included as a mitigation initiative in the City's Hazard Mitigation Plan and this buy-out approach is consistent with King County's Flood Hazard Management Plan as well.

The proposed acquisitions will provide a number of flood reduction benefits. Unlike home elevations, acquisitions will not just reduce but permanently eliminate property losses, associated negative environmental impacts, federally-backed insurance claims, and public health and safety risk. If the houses are not acquired and demolished, these homeowners will continue to be repetitive flood victims and repeatedly experience not only the physical damages to their homes and property but the financial and emotional stress as well. Other benefits associated with implementing acquisitions include the elimination of the number of days the homeowners' families are displaced from their home, the cost of clean-up and time off from work, and the general disruption of daily life. Added benefits come from reduction in the high costs to both public agencies and insurance programs for flood warning and response, emergency housing, repeat insurance claims, and disaster loans and grants for repairs to damaged structures. And, because acquisition projects permanently eliminate flood risks for purchased properties, their benefits continue far into the future.

Removing the residential structures from the 100-year floodway will also result in improved flood storage and conveyance capacity. Total flood storage added from removing the existing building footprints only is 0.20 acres with an increased flood conveyance capacity of 0.10 cubic feet per second. However, considering the potential for additional development on these properties, a total of 0.90 acres of flood storage will be added and flood conveyance would be increased by 0.45 cubic feet per second. Construction of the proposed trail elements will be in compliance with the City's flood hazard regulations and thus not create an adverse impact on flood storage and conveyance. The City's flood hazard regulations require all development to balance the capacity of flood storage such that no increase in the base flood discharge will result, and, for projects within the floodway, projects must pass a "no rise" analysis, an engineering certification that the project will not increase flood levels during the base flood discharge. Furthermore, the proposed pedestrian bridge east of SR 202 provides for a continual shoreline trail and will also allow for future removal of existing 25+ year old pedestrian bridge along the railroad tracks west of SR202 that currently blocks Kimball Creek flood flows and conveyance of woody debris during floods.

In summary, removing the structures from 5 riverfront residential properties in the 100-year floodway will eliminate risk to life and property, as well as increase flood storage and conveyance capacity, which will reduce flood hazards downstream as well as within the project area.

3. Floodplain ecosystem protection or restoration element (*60 points*)

Describe the ecological benefit of the project, its significance, and the ability of the solution to address the overall need in the project area or watershed. Examples include, but are not limited to, reconnecting floodplains, salmon recovery actions, habitat restoration, Channel Migration Zone protections, etc. Evidence of ecosystem benefits include floodplain (including estuary) habitat type (e.g., wetland, side channel, forest) and area restored (# acres), floodplain area protected from bank armoring (# of acres), floodplain area protected from development or other land use change (# acres), hardened bank removal or levee/riprap removal (linear feet), levee setbacks constructed (linear feet, # acres), new side channels or reconnection of old side channels (linear feet or storage volume), salmon species benefitted (# of listed, non-listed species). Secondary evidence includes culvert replaced to restore fish passage or increase conveyance, logjam and or wood structures installed, riparian area planted, and other project-specific goals.

Answer question 3 here:

Floodplain Ecosystem Background

There are no levees on the Snoqualmie River in Snoqualmie. A large portion of the overall project area comprises of undeveloped riverfront open space previously protected from development and acquired through project mitigation associated with the 2004 Snoqualmie Preservation Initiative, as well as prior buyouts of residential properties. By acquiring additional developed parcels, the Snoqualmie Riverfront Project will help to further conserve, protect and restore the natural hydrologic functions provided by floodplains, and connect two open space areas while providing significant benefits to fish and wildlife habitat and reducing the ecological impacts of flood events.

This reach of the Snoqualmie River serves as a significant aquatic habitat area and large wildlife corridor for elk, deer, beaver, wintering bald eagles, osprey, pileated woodpecker, songbirds and other native species. The Snoqualmie River at this location is a King County Comprehensive Plan-designated "wildlife habitat network," which provides natural vegetation that links priority wildlife habitat with critical areas, buffers and open space; the wildlife network is also called out in King County's Biodiversity Report (2008). The Snoqualmie watershed downstream of the project area supports wild runs of coho, chinook, pink, and chum salmon, as well as summer-run and winter-run steelhead trout. Populations of Chinook salmon and steelhead trout in the watershed are listed as "threatened" under the federal Endangered Species Act (ESA). Although Chinook salmon are not found in the immediate project area, which is located just upstream of Snoqualmie Falls, habitat restoration in this area will improve instream conditions for Chinook and other anadromous salmonids downstream as well as resident fish in the project area. Chinook salmon in the Snoqualmie Basin spawn and rear primarily in the mainstem river downstream of the falls, as well as in some of the larger tributaries. According to the Snohomish Basin Salmon Conservation Plan, the two most important restoration reaches for Chinook are located in the mainstem downstream of the proposed project area. One of these reaches, located near Fall City, is the site of a major King County restoration project (aka Snoqualmie River Fall City Corridor Project) partly funded through the Floodplains by Design initiative. The ecosystem benefits from that project will be augmented by the improved water quality conditions and improved river floodplain processes along the Snoqualmie River mainstem resulting from the

proposed project. Both projects employ a similar river corridor strategy of reducing flood hazard through non-structural improvements and restoring floodplain habitat.

The City of Snoqualmie is situated primarily in the Kimball Creek and Upper Coal Creek sub-basins, identified in the Headwaters section of the 2005 Snohomish River Basin (WRIA 7) Salmon Conservation Plan (section 11.16). The plan lists reforestation, instream structure enhancement and riparian restoration in the City as priority sub-basin actions towards salmon recovery. Additional fish populations located at the project site would also benefit, including resident rainbow and cutthroat trout, mountain whitefish, lamprey and torrent sculpin. The water quality improvements are significant for supporting watershed floodplain processes as well as improving water quality downstream where ESA-listed salmonids spawn and rear. These improvements are discussed further under Question 5.

Floodplain Ecosystem Protection or Restoration Benefits

The proposed Phase I project includes 8.5 acres of habitat restoration on both existing open space parcels and proposed residential acquisition parcels. Most of the natural vegetation of residential floodplain lots has been replaced over time with landscape species characterized as lawn grass, residential gardens and orchards. The proposed first phase project includes acquisition of five (5) residential properties; removing a total of ten (10) structures, including housing units, garages, sheds and associated hardscape; and restoring approximately 10,257 square feet of impervious footprint to pervious natural habitat. Residential structures and garages are known to contribute to the toxicity of flood waters via stored onsite chemicals, including cleaning agents, fertilizers, household pesticides and products for automobile maintenance. These older structures are also potential sources of asbestos and lead-based paint, creating potential environmental health impacts to residential occupants and agricultural areas downstream. Moreover, lead paint contributes to stormwater runoff toxicity if it flakes and enters soils. Removal of residential structures from the floodplain therefore reduces potential ecological impacts during immediate flood events both in the local area and downstream, while also reducing adverse long-term impacts to aquatic species. Except for trail construction and occasional river viewing areas, all residential acres acquired will convert to permanent open space protected from development or other land use changes following restoration.

On existing city-owned riverfront open space properties, restoration needs vary along the project extent. Within the northern-most section between the State Route 202 (SR 202) Snoqualmie River Bridge and the Kimball Creek confluence, the native forest canopy is well-established. While the dominant tree species are deciduous, older conifer specimens are also present and provide existing seed sources. There are limited areas with invasive species, including Himalayan blackberry and knotweed, which if not addressed could impact long-term forest health and contribute to the spread of these species downstream. These invasive species occur primarily along the perimeter of the area where canopy cover insufficiently shades out non-natives, though some interior areas may also require remediation. Spot removal of invasives totaling approximately 4 acres will occur throughout this 25-acre area, targeted to open space edges, with restoration plantings concentrated in the one-acre area immediately north of Kimball creek. King County has been controlling knotweed upstream of the project site for several years and plans to continue to monitor the upper forks of the Snoqualmie River helping ensure knotweed reinfestation will not occur.

In the project area south of Kimball Creek, conifer species taper off, then disappear save for a few isolated residential trees in the remainder of the project extent. Approximately 4.5 acres of invasive removal and more concentrated planting is planned for two areas, including 2.98 acres south of Kimball Creek along SR 202, and approximately 1.5 acres of riparian restoration around the proposed boardwalk and southernmost residential acquisition. Overall, the project provides extensive opportunity to restore native vegetation and improve habitat complexity. Native plant species will provide food and shelter for wildlife, plant detritus as food for aquatic species, a source of woody debris, and stream shading once trees mature to help reduce water temperatures. Note also that the city has a long history of working with non-governmental organizations such as the Mountains to Sound Greenway Trust to restore habitat on city-owned lands within the floodplain. Thus, in addition to the proposed actions, the City expects additional opportunities for future restoration to come to fruition as these areas shift from private to public ownership.

Trail components in different sections will provide different ecological benefits, and be designed to fit the spectrum of natural to urban environments along the project length. The main 12-16 ft. wide trail corridor between the SR202 bridge and downtown will be asphalt paved with the possibility of designing portions of the trail with pervious pavement depending on costs. This section of the trail will be routed roughly parallel to SR202, except near Kimball Creek, where it will veer closer to the river to capture views of the confluence with Kimball Creek and the opposite river shoreline. In general, the trail will be aligned to allow for occasional river views but will not be located close to the riverbank to allow for restoration and protection from potential future erosion. In the open space area north of Kimball Creek, a secondary forest loop is proposed as a pervious, soft-surface trail to remain low-impact in the natural setting, excluding a large section of intact riparian forest near the SR202 bridge, which is to remain undisturbed with no public access, as indicated in the City's Riverwalk Master Plan (see section 5). A pedestrian bridge is proposed to cross the creek at the narrowest span to provide for a continual shoreline trail east. This bridge will allow for future removal of an existing pedestrian bridge west of SR202 that currently blocks Kimball Creek flood flows. This bridge, constructed over two decades ago, was designed with lumber contaminated by creosote, which has since been cited as a carcinogen and shown to bio-accumulate in wildlife populations.

South of Kimball Creek, the main asphalt trail will continue until it transitions to a boardwalk treatment in the historic downtown commercial area, where bicycle traffic will be diverted to existing on-road designated bicycle routes. By supporting pedestrian and bicycle travel, the trail will help reduce vehicle travel and its consequent impacts to air, climate and stormwater runoff. The anticipated material for boardwalk construction is Resysta,® a recycled material made of 60% rice husks that is not sourced from tropical forests, while the concrete components of boardwalk construction would utilize aggregate and fly ash from recycled sources.

The City would also like to advance its climate adaptation strategies by working with NOAA researchers on this project, building on its established climate mitigation and leadership legacy. In 2007 Snoqualmie Mayor Matt Larson signed the U.S. Conference of Mayors Climate Protection Agreement; in 2010 the City adopted the Snoqualmie Sustainability Strategy and joined ICLEI to develop a greenhouse gas (GHG) inventory; and in 2012 became a founding member of the 9-City King County–Cities Climate Collaboration (K4C) that works with King County to address climate change. Snoqualmie has been a Tree City USA city for four years and runs a 3-star certified Evergreen Fleets program. In 2013 the City passed Resolution 1232 which authorized meeting

20% of the City's energy usage from green power sources. In 2014 Snoqualmie staff helped co-chair the K4C to develop a Climate Commitments letter for King County Mayors which projects signatures from 13 Cities to help stimulate carbon mitigation across the County. Staff has also submitted budget proposals for 2015 Solarize and 2016 Weatherize campaigns to additionally reduce local GHG emissions. The City would be very interested in working with NOAA NIDS to further develop the project's climate components. Given predicted climate projections of increased storm surges, more frequent and intense rain events, transferal from snow storage to rainfall upstream, and the consequent predictions of more frequent and intense flood events, a project goal is for design to incorporate resilient architectural choices in project design. The City is also interested in climate-considered restoration practices and projections of future flood level heights for municipal updates on base flood elevations in the floodplain Downtown.

4. **Is your project in a Puget Sound Partnership Priority Floodplain? *(5 points)***
(Deschutes, Dungeness, Duwamish/Green, Elwha, Hood Canal, Lake Washington, Lower Skagit, Nisqually, Nooksack, Puyallup, Sauk, Skokomish, Skykomish, Snohomish, Snoqualmie, Stillaguamish, Upper Skagit)
Answer question 4 here: Yes: Snoqualmie

5. **Other benefits (*40 points*)**
Describe how your project maintains or improves agricultural viability, water quality, public open space/recreation access, economic development, or other important local benefits or values, and does not conflict with other objectives of this program. Projects receive points based on the importance of the result produced, the ability of the solution to address the overall stakeholder need and the long-term improvement.
    i. Agricultural viability (evidence of agricultural benefits include reductions in flooding (acres), protection from development (acres), improvement of drainage infrastructure (acres), or other capital or non-capital benefits to agricultural productivity).
    ii. Water quality improvement [e.g., through stormwater infrastructure upgrades, treatment of a TMDL or 303(d) issue, reduction in sediment, restoration of wetlands or riparian areas, implementation of related best management practices, etc.].
    iii. Public access and recreation (e.g., through land acquisition, the development of trails or other recreational infrastructure, etc.)
    iv. Other floodplain values or services of local importance.

Answer question 5 here:

i. **Agricultural viability.** Although no commercially viable agricultural acreage is addressed in this project, some parcels previously purchased through flood mitigation funding have been converted to organic community gardens (as permitted in City open space zoning districts), and/or retained mature fruit or nut trees. No such conversions are proposed in this Phase 1 project, though later phases may include fruit tree retention or community garden establishment if they fit the character and environmental context of such future phases. Below the falls, the vast majority of floodplain acreage in the Snoqualmie valley is in agricultural production. Farms in the Valley are significantly impacted by flooding, including erosive flows, deep inundation and water quality impairment associated with flood waters. In fact, following a large flood in 2009, some certified organic producers in the valley were unable to bring their products to market due to potential contamination by floodwaters. Thus, while the modest footprint of the project limits its benefits at the watershed scale, it will contribute incrementally to the storage of floodwaters in floodplain areas and to a reduction in flood-borne contaminants associated with residential

structures and associated road networks. The city's commitment to supporting viable agriculture is also reflected in the recent participation by a city councilmember in the ongoing "Snoqualmie Fish, Farm, Flood" process, sponsored by King County, to craft multi-objective strategies at the watershed scale to address agricultural viability, salmon recovery and flood risk reduction.

ii. **Water quality improvement.** The Snoqualmie Watershed has two Total Maximum Daily Load (TMDL) water quality plans developed by the Department of Ecology. The proposed project actions will help to support the goals in each of these clean-up plans. A multi-parameter TMDL completed in 1998 addresses dissolved oxygen, fecal coliform, ammonia-nitrogen and pH impairment in different parts of the watershed. More recently, the Snoqualmie River Basin Temperature TMDL Water Quality Improvement Report and Implementation Plan (DOE Publication No 11-10-041, June 2011) was developed to address high summer temperatures that are prevalent in most mainstem and tributary areas. Project components for improved stormwater infiltration and riparian restoration are consistent with the recommended actions for municipalities in the temperature TMDL. According to the Snoqualmie Water Quality Synthesis Report, the mainstem Snoqualmie River near the project site is primarily impaired by high temperature while exhibiting otherwise fairly good water quality, though that study did not assess conditions specifically following flooding. Kimball Creek, on the other hand, is impaired for multiple parameters, including temperature, dissolved oxygen, fecal coliform and pH, and has been the focus of several water quality investigations by the city and the Snoqualmie Tribe. Although most of the creek impacts are attributable to inputs further into the sub-basin interior, proposed improvements to the 450 foot stretch of creek bank within the project area will help to improve water quality before the creek flows into the Snoqualmie River by improved filtering of fine sediment and pollutants in surface runoff and by stream shading to reduce summer temperatures. As stated in section 3, approximately 8.5 acres of shoreline vegetation restoration is proposed as part of the project. Restoration will occur through demolition of structures and impervious surfaces, removal of invasive species, and replanting with native riparian species. The restoration of native-species canopy trees and vegetation along approximately 875 feet of south-shoreline River segments will reduce solar radiation to the river and improve its microclimate to address water quality concerns relative to temperature within this river reach.

The City of Snoqualmie Stormwater plan shows that the length of State Route 202 generally paralleling the proposed project trail (approximately 3,500 feet) lacks stormwater infrastructure for either collection or filtration. It is anticipated that dense native planting of appropriate thicket-forming riparian shrub and tree species along the highway will generally provide water quality benefits to absorb and sequester pollutants and pathogens associated with localized runoff in this urbanized area. However, the project planting plan for the area alongside heavily-traveled state route 202 will require plant species selection that target vehicle pollutant runoff. Roadway runoff typically may contain cadmium, copper, cobalt, iron, lead, nickel, and zinc from exhaust, brake dust, and tire and engine wear. Typical land profiles adjacent to roadways also show hydrocarbons and petroleum byproducts, higher nutrient levels from exhaust and increased sediment loading. Plantings proximal to the road will seek to address some of these issues through species known for increased pollutant uptake to increase the water quality benefits of project plantings.

iii. **Public access and recreation.** Snoqualmie's proposed Phase 1 Riverfront project includes land acquisition, riparian restoration, and construction of a 1.2 mile stretch of a master-planned "Riverwalk" trail network. The project will expand and coordinate local and regional open space

and recreation opportunities, reduce flood risk, improve the shoreline ecosystem, and support economic development.

Acquisition of riverfront properties has been a city priority for many years, in an effort to advance multiple objectives to reduce residential flood risk/damage; increase riverfront open space and public access; and protect and restore the shoreline environment. For the past decade, the City's focus has been on acquisition; 52 floodplain structures have been acquired to date throughout the City's floodplain, with 32 of those residential structures located along the riverbank. These acquisitions have protected 46.25 acres of shoreline open space between the SR202 bridge and the historic Meadowbrook Way bridge. With significant segments now secured in public ownership, the attention has expanded toward making initial public access and restoration improvements in addition to floodplain riverfront acquisition.

Snoqualmie recently completed a Shoreline Public Access and Restoration planning process for the Snoqualmie River shoreline area within the City that involved stakeholders representing various city interests, King County Parks, Mountains to Sound Greenway, Puget Sound Energy, and the Snoqualmie Tribe. The process resulted in a Riverwalk Master Plan based on a preferred public access trail route, which will ultimately provide a 3+ mile main trail loop along both sides of the Snoqualmie River between the SR202 river bridge and the Meadowbrook Way river bridge, with connections to King County's Snoqualmie Valley and Preston-Snoqualmie regional trails. The Riverwalk trail will provide for public access along the shoreline and views of the river corridor that are currently very limited within the city, allowing residents and visitors to walk, bike, picnic and enjoy the riparian environment between Snoqualmie Falls, Snoqualmie's historic downtown commercial area, Three Forks Natural Area, Meadowbrook Farm, and Borst Lake – the former Snoqualmie lumber mill pond. Eventually, the fully completed Riverwalk trail system could include a pedestrian bridge across the river between Sandy Cove Park and Riverview Park in the downtown core, along with a network of paved and soft-surface trails with multiple viewing areas within the river shoreline area. Also per the Master Plan, future phases of the Riverwalk will include, among other elements, recreational features around Borst Lake, including a trail and viewing areas; non-motorized boat access; possible camping areas; an "under the bridge" view park along the river adjacent the SR202 bridge; and an elevated canopy trail connecting the Riverwalk trail with the Snoqualmie Valley Regional Trail.

The proposed Phase I project includes acquisition and removal of 5 residential properties adjacent to the river. Acquisition of these properties removes them from risk of repetitive flooding and associated damage claims and provides needed areas for location of the Riverwalk trail. The four properties north of the downtown historic district abut SR202 right-of-way as well as the river shoreline, while the fifth property abuts a narrow strip of city owned right-of-way adjacent the river. Acquisition of these properties facilitates provision of a continuous shoreline trail, offers unique opportunities for birdwatching and/or superb views of the mainstem Snoqualmie River with Mount Si in the background, and allows for shoreline vegetation management and restoration. As contemplated in the Riverwalk Master Plan, the proposed Phase I project would support a range of passive recreation programming options depending on location, including: conservation (no public access); self-guided natural, cultural and historic interpretation; nature/bird watching; scenic viewing; walking and cycling; urban forestry/arboretum; public gathering; cultural festivals and events; and local commerce. Currently the river is all but hidden from view and there is very little public access. Providing a riparian area trail for walking, bicycling, exploring and relaxing will create a passive recreation amenity for both locals and visitors.

iv. **Other floodplain values or services of local importance.** Like many small towns, the historic commercial area (a King County Landmark District, including the nationally landmarked Northwest Railway Museum Depot) originally built along the river, is in need of economic revitalization. Riverfront property acquisition, shoreline restoration and trail development are identified as important goals in the City's comprehensive plan and Parks and Recreation Plan, and have been recommended as important implementation projects in the 2006 Economic Development, Branding and Marketing Plan and the 2010 Downtown Master Plan. The proposed trail will connect the historic downtown with Snoqualmie Falls, which attracts over 2 million visitors annually, providing increased pedestrian traffic to support local residences. Collectively, protection of riverfront open space, habitat restoration, and the Riverwalk trail will work to enhance local quality of life and maintain a distinctive sense of place for the City that will aid overall economic development efforts, particularly recreational tourism.

6. Cost-effectiveness (*20 points*)

i. Project will be judged on whether the budget is appropriate to the project scope, and designed for project success.
ii. Describe how the project will be continued or maintained after the grant has been completed.
iii. If project cannot be fully funded, explain how the project could be scaled downward.

Answer question 6 here:

i. Budget. The budget for Phase I of the Snoqualmie Riverfront project is appropriate to the project scope and is designed for project success.

Project acquisitions involves the purchase of 5 riverfront properties. The budget includes costs for 5 acquisitions (with a combined assessed value of ~989,300), as well as costs for title and appraisal work, closing and escrow, possible tenant relocation, hazardous waste analysis, and demolition, for a total estimated cost of $1,308,000. The purchase estimates are based on the King County assessed value for each property plus a 25% contingency. The estimated cost for both purchases and ancillary work is based on actual costs from processing current riverfront property acquisitions in Snoqualmie, using King County as the City's acquisition agent. The King County Flood Control District is matching at $150,000 per acquisition for a total of $750,000, or a 57% match for the acquisition component of the project.

The habitat restoration element of the project includes 8.5 acres of invasive plant removal and native plant installation. Budget cost estimates are based on actual average per-acre costs for 3 similar prior projects and one current shoreline habitat restoration project implemented in the City of Snoqualmie. Matching restoration funds will come from King Conservation District and/or KC Flood Control District opportunity funds, either through grants or annual allocations. Both programs fund habitat restoration projects within the Snoqualmie River watershed (WRIA 7).

The Riverwalk trail component includes design and construction of 2,080 lineal feet of a 4-ft. wide soft surface trail, and 3,480 lineal feet of a 12-16ft. wide paved trail for a total estimated cost of $195,900 based on an average of previous bids for City trail construction projects. For the pre-application, it was thought that the primary pave trail would cross Kimball Creek along the SR202 right-of-way on the river side of the roadway. This has since been determined infeasible. Therefore, providing a continuous shoreline trail will require a bridge over Kimball Creek, which is estimated to cost up to $380,000 for engineering, environmental permitting, purchase of a 100

– 150 ft. span precast concrete or prefabricated steel bridge structure, and installation, based on recent prefabricated bridge installations in other city projects in King County. The cost estimate for design and construction of 800 lineal feet of a 16-20 foot elevated boardwalk was based on a preliminary estimate of up to $2.8 million provided by a Seattle-based engineering and landscape architecture firm. The 20% match for trail, bridge and boardwalk design, construction and permitting costs will come from City of Snoqualmie budgeted REET funds. Overall, the budget is in line with the proposed scope of work and will support project success (see budget table on page 20, section 11).

ii. Maintenance. Overbank flooding in Snoqualmie generally lasts only one to two days, as floodwaters typically rise and recede quickly. The intent is to construct the Riverwalk trail, Kimball Creek bridge and boardwalk segments of durable, flood-resistant, low maintenance materials. A prefabricated bridge constructed of CorTen steel or precast concrete with proper finishes will withstand periodic flooding and not require painting or significant maintenance. The elevated boardwalk segment would be either precast concrete or a combination of concrete and Resysta/wood-like material, depending on which material offers the greatest cost efficiency for construction and ongoing maintenance. The soft-surface and paved trails, as well as the boardwalk, will be maintained similar to all other city trail systems. The City of Snoqualmie has a full service maintenance crew in the Parks Department and facility maintenance staff in the Public Works Department, who will maintain the project as needed and in perpetuity. In regards to habitat restoration, the budget includes funding for 3 years of monitoring and maintenance, as has been the practice for all prior shoreline restoration projects completed to date. Once restoration is complete and new plantings are well established, the project will become a naturalized component of the riverbank and minimal maintenance of the vegetation maintenance will be required. Additionally, King County is currently funding knotweed control upstream of the project site reducing the risk of future knotweed infestation at the project site.

As stated in prior sections, this Phase 1 Riverfront project will be the first of a multiphase project. After this project is completed, efforts will continue to implement the future phases identified in the Riverwalk Master Plan as discussed in Section 5. The City has additional acquisition match funding available through the Flood Control District and will continue to apply for additional Conservation Futures and/or FEMA funds to complete the remaining acquisitions. A current application for RCO funding is pending for a combination project involving acquisition of two riverfront residential properties in the floodway located immediately east of the proposed project area, to expand Riverview Park and extend the Riverwalk trail further east. The City match for that project is also secured.

iii. Reduced Scope Alternatives

If project cannot be fully funded, explain how the project could be scaled downward.

If the project cannot be fully funded, aspects of the trail construction and/or acquisition could be eliminated to allow a reduced scope alternative. The reduced scope alternative would still complete design for the entire trail route, including preliminary design, engineering, and cost estimates for the Kimball Creek pedestrian/bicycle bridge, but eliminate bridge construction and convert approximately 3,000 feet of the 3,480 portion of the paved trail to crushed limestone/gravel. This reduced scope would include construction of the Riverwalk trail from the SR202 bridge to a point where a pedestrian crossing over SR202 would be added to the east side of the SR202/Snoqualmie Parkway signalized intersection, to connect with an existing paved trail

paralleling the railroad corridor on the opposite side of SR202. The railroad trail would be used for approximately 2,000 ft., to the Northern St. intersection, where a second pedestrian crossing on SR202 would reconnect to the paved Riverwalk trail into downtown. The existing trail in this section lies below the road grade and does not allow for views of the river, but could serve as an interim trail corridor until the pedestrian bridge is constructed. Removal of the bridge element would bifurcate the shoreline trail and delay later removal of an existing pedestrian bridge along SR 202, which currently contaminates Stormwater and high creek flows with creosote, and partially blocks flood flows. Moving the trail adjacent to SR 202 would also route pedestrians away from approximately 2 acres of open space with strong potential for restoration (bare soils; notable knotweed presence; predominantly deciduous tree species where canopy exists). This reduction in project scope would reduce the budget by approximately $440,000- $480,000.

The full scope could also be scaled back by including the acquisition of only three riverfront properties opposed to the five riverfront properties proposed within this project, focusing on the three properties with confirmed willing sellers. Over the past several years, the City has applied for and received matching funds from the King County Conservation Futures Tax program (CFT), to acquire properties within this reach for open space. The CFT funding has enabled the City to purchase one to two riverfront properties a year with these funds. Thus, the City would continue to pursue the remaining acquisitions, but the purchase may be delayed for two or three years and the riverwalk trail route would need to shift to the existing sidewalk along SR202 where properties are not acquired. This reduction in project scope would reduce the project budget by approximately $530,000-$795,000. Thus, the overall project budget could be reduced by another $970,000-$1,275,000.

7. Long-term cost avoidance: (*30 points*)

a. Describe how your project minimizes or eliminates future costs for maintenance, operation, or emergency response. **(*15 points*)**

Answer 7.a. here:

Acquisition and removal of five flood prone residential properties adjacent the Snoqualmie River within the floodway will minimize or eliminate future costs for maintenance, operation and emergency response to those homes. With an estimated average of approximately $65,000 per flood claim as a result of the January 2009 flood event, estimated flood damages for five flood prone properties over the next 30 years (with a flood twice every 10 years) would be $19,500,000. The proposed acquisitions would eliminate these federally-backed individual insurance claims for flood damage repair. Not only would individual claims be eliminated but the request for public assistance by the local jurisdiction for cleanup and rescue costs would be reduced as well. Past floods have caused millions of dollars in damages to individual properties and public infrastructure. The high cost to both public agencies and the individual property owners of flood warning and response, emergency housing, repeat insurance claims, disaster loans and grants, and repairs will continue if these riverfront properties are not removed from harm's way. Acquisitions are a long-term, cost-effective solution to a problem.

Acquired parcels and other areas identified for shoreline restoration will be largely revegetated with native species, except to accommodate the trail and targeted viewing areas. Once plants are established and grown in, the need for ongoing irrigation or maintenance should be minimal, with trails and boardwalk maintenance responsibility transferring to the City Parks Department. King

County is committed to future monitoring and control of invasive knotweed in this reach of the Snoqualmie River.

b. Describe how your project accounts for expected future changes to hydrology, sediment regimes, or water supply resulting from other floodplain management efforts, land use changes, extreme weather events, or other causes. ***(15 points)***

Answer 7.b. here:

Flood risk along the Snoqualmie River is expected to increase due to climate change. The City intends to conduct climate change studies to characterize potential changes in flood regime 20, 40 and 80 years in the future and to evaluate infrastructure resiliency. Proposed buyouts will remove from the floodplain some of the highest risk riverfront residential properties reducing both individual and city vulnerability to future hydrologic changes. Section 3 lists specific climate resiliency components that support long-term cost avoidance; if partnership is an option, the City would like to further develop this proposal's climate component during fall 2014 and winter 2015 as part of the NOAA NDIS and water resources societal challenge grant opportunity.

A recent review of historical channel migration patterns through the Phase I, II and III project vicinity was completed as part of a City funded bank restoration plan for Sandy Cove Park (located at River Street in downtown Snoqualmie). That review identified that within the City limits the Snoqualmie River has migrated the most downstream (north) of River Street, where there is less bank hardening. The reach of the river upstream (south) of River Street has had the left bank hardened by rock and other non-erodible materials that were placed throughout the 1900's. Riverfront residential property buyouts of these hardened banks will provide new opportunities for bank softening and restoration efforts. Providing the river with natural bank material in open space areas will allow the river space needed for natural adjustments in the channel form in response to sediment delivery and large channel changing floods without impacts to private property.

In the project vicinity outside of the downtown commercial landmark district, and along the entire north shoreline, the riverfront is zoned Open Space, allowing for limited, low density land uses. Outside of established residential areas, Constrained Residential zoning limits further subdivision. The City's Shoreline Master Program includes the floodplain under shoreline jurisdiction. The City is currently updating the SMP, and the draft shoreline management regulations will provide for wetland buffers and other ecosystem protections consistent with Ecology's guidance. All of these actions help to mitigate immediate and future impacts due to floodplain hydrologic changes.

The project also helps address a wider range of potential future changes through the installation of well-structured native vegetation that will reduce and control non-native species within the shoreline and floodplain, thereby increasing and retaining plant diversity and habitat diversity. The increased hydraulic roughness provided by riverbank vegetation will also help slow flood flows, while the stabilizing effect of root structures reduce bank erosion and protect the channel from the direct force of flow by plant biomass. Except to allow for occasional visual access to the river, the proposed trail will be set well back from the shoreline edge to avoid potential hydrologic and water quality impacts to the river. In large part, the overall project components are typical response mechanisms to address hydrological, sediment supply, land use and weather changes. The City is also participating in the development of the EPA-funded Snohomish Basin Protection

Plan lead by King County, Tulalip Tribes and Snohomish County. The plan (expected to be completed in 2015) will determine actions to protect hydrology Snohomish Basin salmon.

8. Demonstration of need and support (*30 points*)

a. Describe how your project is consistent with the intent of existing floodplain management or habitat recovery plans or is specifically identified through existing plans or work programs. (Elements of the project may have been developed through more than one planning process. Please identify the planning process used for each major element if they are not from a common plan.) ***(15 points)***

Answer question 8.a. here:

The Snoqualmie Riverfront project includes land acquisition, habitat restoration and a riverwalk trail consistent with the intent of various City plans and work programs:

- The King County Department of Natural Resources River and Floodplain Management section implements flood risk reduction projects and programs to protect public safety along King County's major rivers. The acquisitions work of this project is funded by the King County Flood Control District (FCD). In 2012, the City entered into an agreement with King County, which provides FCD funds to acquire properties within the project area. The project, termed the *Upper Snoqualmie Residential Flood Mitigation-Riverfront Acquisition Project* is in the *FCD Capital Improvement Program* list, allocating funds of up to $150,000 per property for a total of $3,000,000, allowing for costs associated with acquisition, restoration and demolition.
- Habitat restoration is consistent with the 2005 Snohomish Basin Salmon Conservation Plan to restore riparian areas along the Snoqualmie River in the City. The acquisition project is listed in the Snoqualmie Watershed Forum's *Snoqualmie 2015: Building for Salmon Recovery and Watershed Health*, listing priority salmon recovery projects in the Snoqualmie Watershed.
- An objective of the *2005 City of Snoqualmie Downtown Vision Plan* is to expand and improve the parks, trails, linear open space amenities in and around the downtown by opening up views and access to the river from downtown parks and a riverwalk trail.
- Recommendation #18 of the City's *2006 Economic Development, Marketing and Branding Plan* calls for opening up the riverfront for additional visual public access.
- The *2009 City of Snoqualmie Comprehensive Plan*, including the 6-Year CIP, identifies acquisition of vacant properties along the Snoqualmie River as open space for shoreline protection, park space, and visual shoreline access. The nearly completed update of the comprehensive plan and CIP continue to highlight riverfront acquisitions, restoration and trail development.
- The Snoqualmie Watershed Forum (WRIA 7) and King County published the *Snoqualmie Watershed Synthesis Report (Kaje, 2009)*. The report contains recommendations for restoration and maintenance of native habitats within floodplains and riparian zones within the City.
- The *2010 City of Snoqualmie Hazard Mitigation Plan* is the city's vision for reducing its risk from all hazards by identifying resources, information, and strategies for risk reduction. One of the mitigation initiatives in the Hazard Mitigation Plan calls for the continuation of pursuing cost effective property acquisition opportunities along the Snoqualmie riverfront.
- As a participant in the FEMA National Flood Insurance Program's Community Rating System Program, the City developed a *Floodplain Management and Repetitive Loss Plan*, in which property acquisitions for open space preservation are identified as a mitigation measure.
- The *2010 City of Snoqualmie Downtown Master Plan* identifies as a priority the acquisition of open space and development of a connected trail system between Snoqualmie Falls, the 418-acre Three Forks Natural Area and the ~500-acre Meadowbrook Farm open space, to provide a link between

numerous local and regional trails in the area and support downtown revitalization.

- The *2011 City of Snoqualmie Bicycle & Pedestrian Recommendations Report* provided a conceptual preliminary location of the riverwalk trail, which was incorporated in the 2012 Open Space, Parks and Recreation Plan.
- The *2012 Open Space, Parks and Recreation Plan* includes a policy directing acquisition and preservation of additional shoreline acquisition for open space, riverfront trails and water-related recreation. The plan lists the Riverwalk in its six-year Capital Improvements Program.
- In 2014, the City recently completed a *Shoreline Public Access and Restoration planning process* that involves stakeholders representing various city interests, King County Parks, Mountains to Sound Greenway, PSE, and the Snoqualmie Tribe. The process resulted in a Riverwalk Master Plan based on a preferred public access trail route along the Snoqualmie River that connects to other regional trails and identified priority areas for shoreline habitat restoration.
- The City is currently nearing completion and approval of an update to its *Shoreline Master Program* which includes policies and regulations that address reasonable and appropriate shoreline uses, protection of shoreline environmental resources and protection of the public's right to access and use the shorelines, consistent with the State master program guidelines.
- The Snoqualmie Watershed Forum (WRIA 7) created a *Salmon Conservation Plan* to "guide protection and restoration actions in the Snohomish Basin", of which the Snoqualmie River is a tributary. As a result of this plan, the following projects have been implemented in the city:
    - 2002 Kimball Creek Monitoring Project- Local college students monitored the water quality in Kimball Creek and developed recommendations for improving water quality.
    - 2004 Snoqualmie River Bank Restoration Project- Remove invasive plants, install riparian planting and erosion control on 500 feet of stream bank.
    - 2005 Kimball Creek Restoration Phase II- Restore riparian buffer along Kimball Creek by removing non-native plants, installing 2,250 native trees, shrubs and willow stakes.
    - 2006 to present, Riverfront Property Acquisition- Protect riverfront open space-zoned parcels along the Snoqualmie River in the City of Snoqualmie for open space in perpetuity.
    - 2009 Kimball Creek Water Quality Improvement Snoqualmie Tribe water quality report- Perform field surveys and data collection to understand why water quality is impaired in the creek and then prioritize stream reaches for targeted restoration and water quality improvement measures.
    - 2010 Kimball Creek Watershed Pollution and Habitat Restoration- riparian restoration near the mouth of Kimball Creek to improve water quality in the Kimball Creek sub-basin.
- The City of Snoqualmie has partnered with the *Mountains to Sound Greenway Trust* on several habitat restoration projects within the project vicinity. Some of the goals of the Trust that are pertinent to shoreline areas include: land acquisitions for wildlife and recreational access; creating a connected regional trail system; and conducting habitat restoration.

b. Describe which flood control authorities, Tribal Nations, local governments, lead entities, key stakeholders or decision-makers representing floodplain interests located within the river reach or affected by the project have provided letters of support explicitly endorsing the project and its outcomes for their interests. ***(15 points)***

Answer question 8.b. here:

The City of Snoqualmie's floodplain stakeholders and interests supporting this project are as follows:

- King County Flood Control Zone District (FCD), Snoqualmie Basin Floodplain Management

Section, protects public health and safety, regional economic centers, public and private properties and transportation corridors.

- King County Parks, interests in providing recreational experiences, protecting natural areas, enhancing the region's quality of life and preserving public lands.
- Watershed Forum WRIA 7, committed to fostering collaboration on watershed issues and implementing water resource and habitat projects, partnering with local cities and the Snoqualmie Tribe.
- Snoqualmie Economic Development Committee (EDC). The EDC represents economic interests in Snoqualmie and areas affected by the floodplain.
- Mountains to Sound Greenway Trust, whose mission is to lead and inspire action to conserve and enhance the landscape along the Interstate-90 corridor.
- Puget Sound Energy, involved in projects that support the environment including the hydroelectric generation plant at the Falls, which provides clean energy to PSE's customers.

The letters of support are attached to the grant application.

9. Readiness to proceed and complete the proposed phase of the project (*25 points)*

Describe how your project is ready to proceed with the scope of work, and your capacity to complete the project successfully and maintain it over time, including your project schedule and deliverables. Describe your experience with similar projects. If your project is acquisition only, describe how you will complete floodplain restoration subsequent to the acquisition.

Answer question 9 here:

For its size, Snoqualmie has an impressive history of open space conservation, including multicomponent projects such as the joint acquisition, conservation and management of Meadowbrook Farm, a 500-acre floodplain/habitat urban separator, with the City of North Bend; acquisition and development of 8.6 acres for Snoqualmie Point Park; and, with King County, the Snoqualmie Preservation Initiative, which permanently protected 145 acres directly adjacent to Snoqualmie Falls and 9,000 acres of Raging River Valley forestland.

Though smaller in scale, the city has completed 45 riverfront and floodplain acquisitions throughout the City, with additional acquisitions in progress. City staff coordinate with the property owners regarding potential acquisition and use King County Department of Natural Resources and Parks Water and Land Resources Division as our acquisition agent. Also, since 2008, the City has completed four shoreline restoration projects in coordination with the Mountains to Sound Greenway to improve habitat in the city's portion of the Three Forks Natural Area. The City is also accustomed to navigating construction projects of this size.

A $3.5 million Downtown Phase I street and utility reconstruction project was completed in 2011 and a second $4.0 million phase involving major bicycle, pedestrian, streetscape and utility improvements along SR202 is currently under construction.

Snoqualmie is ready to proceed with the proposed project, starting in parallel with the acquisitions and design for the riverwalk trail components. The City has adequate staff within the Planning, Public Works, Parks and Legal departments to manage all phases of the project, with a major project engineer to manage project permitting and construction. Planning staff will coordinate with King County and the City Attorney for the acquisitions. The intent is for Planning and Parks staff to work with the Mountains to Sound Greenway Trust for design, installation and monitoring of the restoration component.

Planning staff are experienced in managing complex grant projects and will oversee grant implementation and reporting. Prior projects managed by current city staff and who will manage the proposed project include:

- 9 riverfront and floodplain acquisitions
- 5 FEMA home elevation grants (elevated 55 residences)
- 7 shoreline restoration projects, coordinating with MTSG

10. Pilot project and leverage opportunities *(25 points)*

a. If applicable, describe how your project could serve as a pilot effort or result in changes or results with broader impacts to the state. ***(10 points)***

Answer question 10.a. here:

This project demonstrates a viable multi-objective pilot proposal to communicate with other communities plagued by frequent floods. Communities that experience frequent floods come to see nearby rivers and waterbodies primarily as a threat, barrier or problem, providing little incentive to help protect that waterbody during slow and drier seasons. Investing in projects that increase flood safety and advance ecological health, while also increasing shoreline access and potentially improving tourism, can transform local perception of the River from being a burden or a non-entity to a valued asset. Attractive infrastructure and healthy forests along the River attract visitors, which can be guided to low-impact activities and improved understanding of river systems. Attractive infrastructure and visitors also indicate to local communities that natural resources are innately connected with fostering a distinctive sense of place and economic value, stimulating improved stewardship activity. By helping a community be proud of its River, a project galvanizes support for long-term outreach activities to support River health, such as future raingarden programs, pet waste education and appropriate vehicle care. Every community with a River in its boundaries should have a river trail and low-impact River parks; communities lacking such infrastructure indicate a long-term disconnect from its most immediate natural water system, and an untapped economic resource. The climate component of this project also provides an interesting attribute to pair in a long-term pilot model. Evaluating means to increase flood infrastructure resiliency to climate impacts, and simultaneously researching long-term projected flood elevations to improve future planning in adjacent City housing stock, provides a unique policy track which could encourage or support requiring other communities to similar evaluations.

b. If applicable, describe how your project leverages existing investments, such as SRFB, FCZDs, Dike Districts, TMDLs, WWRP, ESRP, NEP, and other funding sources. Evidence of this will be based on the amount and diversity of the leveraged funding sources. ***(10 points)***

Answer question 10.b. here:

The project is proposing to leverage approximately $750,000 of secured King County FCZD funds through an Agreement for the project reach, and an additional $33,000 is proposed to be leveraged from King Conservation District (KCD) opportunity funding or other future grant applications. Proposed KCD and FCZD funding combined in the project are estimated to be $783,000. No project phase is projected to use SRFB or ESRP funding, though it is anticipated the City would apply for WWRP funds through the RCO for phase II of the project. Although not directly connected with this project, project work would occur in Snoqualmie Valley, the same area of the NEP Watershed Grant Program award to KCD for its "When cows meet clams project." Additionally, future King County Conservation Futures Tax (CFT) funds may be utilized to leverage

the acquisition component of this project.

c. If applicable, describe how your project addresses inequity or social justice issue by benefitting underserved communities. ***(5 points)***

Answer question 10.c. here:

Downtown Snoqualmie contains a large majority of the older and smaller-footprint housing stock in the City, correlating with a lower housing cost and a higher concentration of lower-income persons compared to overall city statistics. Among 670 housing units downtown (single & multifamily), at least 322 have are 1,500 square feet or less. Notably, the proposed project trail is 0.33 miles (a 5 minute walk) away from Pickering Court, a King County Housing Authority–maintained subsidized housing development providing 30 housing units open to families, seniors aged 55 and over, and disabled persons. KCHA subsidized housing is for those with household incomes at or below 80 percent of the area median income (AMI), with preference to those at or below 30% AMI. Approximately 1.1 miles away is a Habitat for Humanity 50 unit housing development. Units are retained by Habitat, where new applicants must be at or below the 50% AMI level, though practicably the housing units sell closer to the 30% AMI level based on recent sales. For both developments, proximal existent trails run directly alongside roads and do not go through open space areas, reducing access to natural trail experiences. As the project would be located in an area that serves economically disadvantaged communities, implementation of this project would provide recreational benefits to disadvantaged communities.

11. Budget (add more tasks as needed).

	PHASE I			PHASE II	PHASE III
Task	**Amount Requested from Ecology***	**Other Funding for Project** (20% of Total Cost Minimum)**	**Total Cost**	Total Cost (includes 20% matching)	Total Cost (includes 20% matching)
Acquisitions			(5 properties)	(2 properties)	(9 properties)
Task 1 – Acquisitions	$426,800	$562,500	**$989,300**	$594,500	$1,647,765
Task 2 – Administration	$25,000	$40,000	**$65,000**	$26,000	$117,000
Task 3—Title and Appraisal work	$0	$20,000	**$20,000**	$8,000	$36,000
Task 4—Prepare closing offers and escrow	$0	$17,500	**$17,500**	$7,000	$31,500
Task 5 – Relocate tenants (if any)	$0	$75,000	**$75,000**	$30,000	$135,000
Task 6 – Analyze potential hazardous waste on site	$0	$5,000	**$5,000**	$2,000	$9,000
Task 7 – Demolition	$120,000	$30,000	**$150,000**	$60,000	$270,000
Public Access			(1.2 miles)		
Task 8 – Design and Permitting	$326,064	$81,516	**$407,580**	$35,000	$16,000
Task 9 – Riverwalk trail and boardwalk	$2,212,800	$553,200	**$2,766,000**	$5,000	$5,000
Task 10- Pedestrian bridge	$304,000	$76,000	**$380,000**	$269,000	$120,000
Task 11- Project Management	$50,656	$12,664	**$63,320**	$0	$0
Restoration			(8.5 acres)		
Task 12 – Mechanical and manual weed control and native plant installation	$108,000	$27,000	**$135,000**	$16,000	$23,800
Task 13- Maintenance and Monitoring	$24,000	$6,000	**$30,000**	$3,500	$5,250
Totals	$3,597,320	$1,506,380	**$5,103,700**	$1,061,400	$2,418,815

*Amount requested from Ecology under this grant program

**Other sources of funding dedicated to this project. Insert narrative below that details what the source of funding is and whether or not it has been received or applied for but not yet received. Match must be at least 20% of Total Project cost.

Narrative and/or Table of other funding sources for project, here: Described above.

If it's not possible to fully fund this proposal, please describe a *phased* approach that would still significantly advance the effort:

- Under Acquisitions, $750,000 of match is secured through an agreement with the King County FCZD.
- Under Restoration, $33,000 of match is indicated for FCZD and King Conservation District (KCD) opportunity funds; opportunity funds are allocated to participating jurisdictions annually and are allocated automatically so long as applications meet funding criteria. As such, these funds are not technically awarded for this project at present, but project allocation is relatively straightforward.
- Remaining match will come from City funding sources.

12. **SCOPE OF WORK:** Please attach a Scope of Work and schedule. If your proposal is a phase of a larger multi-year project, please place this proposal in the context of the overall project and provide preliminary cost projects to complete the project.
    - See attached Scope of Work and Schedule.

13. **Maps:** Please attach at least two (2) maps to your application. The first map should be a vicinity map and the second should be a map of your project.
    - See attached Vicinity map and Project site map.

14. **Planting Maintenance/Survival:** If your project includes plantings, please provide a description of how you will ensure plant survival and maintenance.
    - Project funding includes three years of maintenance for plant establishment; afterwards the project would be maintained through regular shoreline invasives control programs. This topic is addressed more under Question 6, ii. Maintenance.

15. **Photos:** Photos are not required, but if you think they enhance our understanding of your application, please include them. We are particularly interested in *"before"* photos that can be matched with *"after"* photos.
    - See attached photos.

16. **Executive order 05-05, Archaeological and Cultural Resources** (online at http://www.governor.wa.gov/office/execorders/eoarchive/eo_05-05.pdf) directs state agencies to review all capital construction projects for potential impacts to cultural resources to make sure that reasonable action is taken to avoid adverse impacts to these resources. If this grant program is funded by the 2015 Legislature, successful grant applicants will be required to submit additional information to Ecology to comply with this Executive Order.
    - If this grant is awarded, additional information will be submitted to Ecology to comply with this Executive Order.

Additional factors in ranking and award: This is a very new funding source. To ensure that projects meet the objectives of the program, these additional factors will be considered in creating the proposed funding list:

- **Balance of project types:** Balance funding ready-to-proceed construction projects with funding pre-construction activities. This balance in project types is vital to ensuring success over time.
- **Geography:** There is strong interest in ensuring that projects in all areas of the state receive funding.

- **Advancing multi-benefit floodplain management:** It is important that the project list advance the principles and practical application of multi-benefit floodplain management.

Certification

I certify to the best of my knowledge that the information provided above is true and correct and that I am legally authorized to sign and submit this information on behalf of the organization applying for this grant.

Nancy Tucker 9-8-14

Signature Date

Nancy Tucker, Planning Director

City of Snoqualmie